

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment filed 9/14/2009 has been entered. Claims 14-15, 40, 45, and 49 are currently amended. Claims 14-49 are pending.

### ***Response to Arguments***

1. Applicant's arguments filed 9/14/2009 have been fully considered but they are not persuasive.

Applicant argues on the 3<sup>rd</sup> to the 4<sup>th</sup> paragraph of page 13 that remote controllers 9a, 9b mounted on the cables 11, 15 of the surgical devices 7, 8 of Sakurai are utilized to select the device to be controlled, while the separate footswitch unit does not allow selection of a surgical device. The examiner respectfully disagrees. Paragraph 31 of Sakurai mentions "Fig. 6C shows 100% ultrasonic power that is output when the pedal A is pressed;" When an operator presses pedal A or B, the operator is in fact selectively operating the surgical device, thus the footswitch unit does allow the selection of a surgical device. Remote controllers 9a and 9b used in the system functions as safety switches to prevent accidental operation of the surgical devices. But once the surgical devices are enabled, selective operation of the surgical devices are based on the foot pedals.

Applicant argues on the 2nd paragraph of page 14 that Sakurai discloses the use of remote control selection devices in a surgical system, but chooses not to combine such remote controllers used for selection purposes with the separate foot switch 4 disclosed therein for controlling the selected devices. The examiner respectfully

disagrees. As explained above, the switches located on the cables are not selection devices, but rather safety switches to enable the foot pedals. There are only two medical devices in the system of Sakurai. In order to design a system with a high number of medical devices to be controlled, it would not be practical to have too many pedals for each medical device, having too many pedals would take up too much space, increase the costs, and make the system very cumbersome. A device selection switch is a well known prior art, Dustin teaches one such well known device selection button on a remote control to reduce the number of different remote controls for each entertainment system in a home environment, thereby reducing clutter at home. Therefore, in view of the prior arts and Dustin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a selection control on the footswitch unit in order to select a medical device to be controlled in a system with a high number of medical devices.

Applicant argues on the 4<sup>th</sup> paragraph of page 15 that there is no motivation to modify the footswitch unit of Sakurai to choose wireless device selection signals with the footswitch unit. The examiner respectfully disagrees. The motivation is to reduce the use of wires. Wireless communication technology is used to allow communication from one device to another without the use of wires that frequently cause entanglement. Wang is teaching one such wireless communication device through the use of a master controller sending wireless signals to a slave controller to control the medical devices connected to the slave controller.

Applicant notes on the last paragraph of page 17 that King was not applied in the rejection of Claims 14 and 15. The applicant is correct, the examiner has made typographical errors on the rejections of the dependent claims; however, it is clear the rejections are based on the teachings of Sakurai, Dustin, and Wang, as stated in the rejection of the independent claims.

Applicant argues on the 5<sup>th</sup> paragraph of page 18 that the arrangement taught by Snyder differs entirely from the direct electrical connection disclosed in Snyder. The examiner respectfully disagrees. The rationales for arriving at a conclusion of obviousness suggested by the Supreme Court's decision in KSR include: Simple substitution of one known element for another to obtain predictable results (see III.B. of the guidelines). In this case, the simple substitution of the contact 70 interconnecting to the positive and negative terminals of the source of power for charging the battery is replaced by an induction coil coupled to a power supply for charging the battery. This simple substitution requires ordinary skill in the art and produces predictable results, therefore the claimed invention is considered obvious. The applicant further argues the charging device of Stephens is not contemplated for use with a receptacle. The examiner respectfully disagrees. The claim states a receptacle to receive the control console, in Fig. 3, Snyder teach a receptacle in the form of a cradle to receive a mobile device.

Applicant argues on the 4<sup>th</sup> paragraph of page 20 that if Yaroch were combined with Right and the above listed prior art, such a combination is believed improper as Yaroch is further modifying the controller as modified by Dustin and Right. The

examiner respectfully disagrees. Section III.A. of the KSR guidelines specifically state combining prior art elements according to known methods to yield predictable results is considered obvious. Right teaches a system with a plurality of control consoles; Yaroach teaches an RF transmitter with an identifier; both Right and Yaroach are prior art elements that may be combined to yield predictable as stated in the rejections below.

Applicant argues on the 5<sup>th</sup> paragraph of page 21 that there is no motivation to utilize the teachings of Yaroach to provide an apparatus identifier for each wireless transmitter. The examiner respectfully disagrees. Yaroach teaches utilizing identifiers to identify each transmitter; a separate code is given for each type or manufacturer of the remote transmitter. The motivation to utilize the teachings of Yaroach is to identify the control console.

Applicant argues on the 4<sup>th</sup> paragraph of page 22 that there is, no disclosure or suggestion of the laser 10 of Linhares having a suction hose 28 attached thereto. The examiner never stated the laser 10 of Linhares having a suction hose attached. In the rejection the examiner has made, it is stated the surgical system with a suction hose attachment to allow the surgical system to be use with different pieces of equipment. As depicted in Figure 1, the surgical system 8 includes smoke evacuator 22 with suction hose attached.

Applicant argues on the 3<sup>rd</sup> paragraph of page 25 that a synchronization feature is not present in the applied prior art. The examiner respectfully disagrees. The combined teachings of Sakurai, Dustin, and Wang discloses a wireless console in communication with a plurality of medical devices, it is inherent the wireless console is

synchronized with the receiver unit in order to send commands to the medical devices connected to the receiver unit.

2. Applicant's arguments, see paragraph 4 of page 25, filed 9/14/2009, with respect to claim 45 have been fully considered and are persuasive. The rejection of claim 45 has been withdrawn.

***Allowable Subject Matter***

Claim 45 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 14-15, 23-24, 31-35, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. (US 2002/0156466), in view of Dustin (US 6,853,308), and further in view of Wang et al. (US 6,646,541).

Regarding claims 14-15 and 31, Sakurai discloses a system (via a surgical system, See the Abstract and Figures 1-4 and 9) to allow an operator to control a plurality of medical devices (ultrasonic generator 2 and electric cautery apparatus 3) during an endoscopic medical procedure, the system comprising:

a foot-operated control console (via foot switch unit 51, Fig. 9) for controlling the plurality of medical devices (Figure 1), the foot-operated control console comprising:

a plurality of controls for operation by a foot of the operator (via pedals A and B), the plurality of controls including a device control for manually operating a device (via pedals A or B on foot switch, See paragraph 33).

Sakurai did not specifically disclose a separate selection control to allow the operator to select a medical device to be controlled from among the plurality of medical devices.

Dustin teaches a remote control with device selection buttons to allow a particular device to be selected and remotely controlled. As is well known, a device selection button allows some functional buttons such as the volume up or down button to be used on multiple devices. Devices such as the TV and the CD player may be remotely controlled using the same volume up or down button by utilizing the device selection buttons (See Col. 4, lines 16-24 and button group 4 on Figure 2A).

From the teachings of Dustin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Sakurai to include a separate selection control on the control console to allow the operator to select a particular medical device to be controlled from among the plurality of medical devices as taught by Dustin to select and control a particular medical device without adding additional device control buttons (additional foot pedals) for each medical device, thereby reducing costs by using the same device control buttons if there is a large number of medical devices in the system.

The system of Sakurai accepts control inputs directly using wires. Sakurai did not specifically disclose the system further comprising: a wireless transmitter to transmit over a wireless medium a selection signal responsive to operation of the selection control and a device control signal responsive to operation of the device control; a wireless receiver for receiving the selection signal and the device control signal via the wireless medium; a data communication device for transmitting a selected device operating signal compatible with the selected medical device to the selected medical device over a wired communication medium, wherein the selected device operating signal is based on the control signal and the selection signal.

Wang teaches a control system (10) for controlling a plurality of medically devices (Abstract). The control system comprising: a master controller (12) and at least one slave controller (14). The master controller may control medical devices connected to a slave controller (master controller in communication devices via a slave controller, See Col. 2, lines 16-19). The master controller may communicate with the slave controllers using electrical or wireless communication (See Col. 4, lines 23-30). The master controller may include a wireless RF transmitter to transmit over a wireless medium a selection signal to select a medical device to be controlled and a control signal to control the operation of the medical device (See Col. 2, lines 3-13). The slave controller may include a wireless receiver to receive the wireless selection and control signals (via master controller sending signals to medical device connected to the slave controllers, See Col. 3, lines 19-24).

From the teachings of Wang, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the foot-operated control console (See figure 9) of Sakurai to be wireless, and the system of Sakurai to further include a wireless transmitter to transmit over a wireless medium a selection signal responsive to operation of the selection control and a device control signal responsive to operation of the device control; an apparatus including a wireless receiver for receiving the selection signal and the device control signal via the wireless medium; a data communication device for transmitting a selected device operating signal compatible with the selected medical device to the selected medical device over a wired communication medium, wherein the selected device operating signal is based on the control signal and the selection signal as taught by Wang to remotely control a plurality of medical devices.

Regarding claims 23 and 24, Sakurai discloses the device control comprises a foot pedal for providing the device control signal (via foot pedal A or B, see paragraph 36-37). Dustin teaches a selection control comprising a switch to select devices to be controlled. (See button group 4 on Figure 2A) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sakurai to include the selection control comprises foot switches as taught by Dustin to select devices to be controlled. Sakurai further discloses each of said foot pedals is capable of controlling different ones of said medical devices (via pedal A to control ultrasonic generator 2, and pedal B to control electric cautery device, See paragraphs 36-37).



Regarding claim 32, Wang discloses the receiver is connected to the medical devices over a wired communication medium (via communication ports 46 on slave controllers for electrical communication, See Fig. 1 and Col. 4, lines 23-26), and the wireless transmitter comprises an RF transmitter and the wireless receiver comprises an RF receiver (See Col. 4, lines 26-30).

Regarding claim 33, Wang discloses the receiver is connected to the medical devices over a wireless communication medium (via medical devices may be communicated with wirelessly, See Col. 4, lines 26-30).

Regarding claim 34, Sakurai in view of Dustin discloses at least one selection control switch comprises one of a plurality of selection control switches (in order to selective control multiple medical devices, see rejection on claim 31 above) and at least one control pedal comprises one of a plurality of said control pedals (via pedals A or B, Figure 1 in Sakurai).

Regarding claim 35, Sakurai discloses said plurality of medical devices comprises at least one of an electrocautery tool (via electric cautery apparatus 3, Para. 33).

Regarding claim 38, Sakurai discloses said plurality of control pedals enable simultaneous control of first and second ones of said medical devices (via Pedal A or B, Para. 36-37).

2. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claims 14-15 above, and further in view of Stephens (US 5,734,254).

Regarding claim 16, the combination of Sakurai, Dustin, and Wang did not disclose the foot-operated control console further includes: a battery sealed within the foot-operated control console, for powering the foot- operated control console; However, the examiner takes Official Notice that it is obvious to one of ordinary skill in the art at the time the invention was made to modify the control console to include a battery within a remote control console in order to make the control console free from electrical wires to power the control console, thereby making the control console more portable and convenient to use.

Sakurai did not disclose the control console further includes: an induction element; and a charging circuit to control charging of the battery by power electromagnetically induced in the induction element.

Stephens teaches a battery charging system for charging batteries from a portable appliance. The system comprises an induction element (transformer winding 32, Figure 1), and a charging circuit (via power converter 30 including voltage and drive level control, and current limiting, See Col. 3, lines 34-41) to control charging of the battery by power electromagnetically induced in the induction element. (See the Abstract)

From the teachings of Stephens, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the control console of the combination of Sakurai, Dustin, and Wang to include an induction element; and a charging circuit to control charging of the battery by power electromagnetically induced

in the induction element as taught by Stephens to charge a battery in a portable electronic device.

Sakurai teaches wireless communication may be performed by radio waves (See paragraph 94). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the wireless transmitter comprises an RF transmitter and the wireless receiver comprises an RF receiver in order to use a commonly used wireless communication technology.

Regarding claim 22, the combination of Sakurai, Dustin, and Wang did not disclose the foot-operated control console includes a removable battery to power the foot-operated control console; and wherein the system further comprises a charger to receive and charge the battery when the battery is removed from the foot-operated control console.

Stephens discloses portable devices such as notebook computers have removable batteries; Stephens teaches a battery charging system for charging removable batteries from portable devices. (See the Abstract)

From the teachings of Stephens, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include the foot-operated control console further includes a removable battery to power the foot-operated control console; and wherein the system further comprises a charger to receive and charge the battery when the battery is removed from the foot-operated control console as taught by Stephens to use a battery charging system for charging removable batteries from portable devices.

3. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin, Wang, and Stephens as applied to claims 14-16 above, and further in view of Snyder et al. (US 6,043,626).

Regarding claim 17, the combination of Sakurai, Dustin, Wang, and Stephens discloses the structural elements of the claimed invention, wherein Stephens discloses the system comprises a charging station (via adapter 40) including: an induction coil (via transformer winding 62), coupled to a power supply (AC/DC converter 70) for charging the battery in the foot-operated control console inductively when the foot-operated control console is coupled to a charging station (See Figure 1 and Col. 4, lines 7-21).

But the combination of Sakurai, Dustin, Wang, and Stephens did not specifically disclose the charging system further including a receptacle to receive the foot-operated control console.

Snyder teaches a portable electronic device holder having a housing defining a receptacle (via a cradle) for holding and charging an electronic device. (See the Abstract and Figures 1-3)

From the teachings of Snyder, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, Wang, and Stephens to modify the charging station to include a receptacle to dispose the foot-operated control console as taught by Snyder to secure the control console while it is charging on the charging station.

Regarding claim 18, the combination of Sakurai, Dustin, Wang, Stephens, and Snyder disclose the claimed invention, wherein Snyder discloses the docking station

includes a receptacle (via a cradle, See Figures 1-3) to physically couple to the foot-operated control console.

Regarding claim 19, Snyder discloses the charging station is an element of the docking station (via the portable electronic holder includes a charger, See the Abstract). The combination of Sakurai, Dustin, Wang, Snyder, and Stephens did not specifically disclose the receiver unit is contained within the docking station. Cordless home phones are commonly equipped with a docking station; the docking station includes a receiver unit to communicate with the home phone. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, King, Stephens, and Snyder to include the receiver unit is contained within the docking station in order to communicate with the docking station when the control console is at a distance.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin, and Wang, as applied to claims 14-15 above, and further in view of Right (US 4,513,284) and Yaroach (US 5,790,065).

Regarding claim 20, the combination of Sakurai, Dustin, and Wang did not disclose the foot operated control console comprises one of a plurality of foot operated control consoles. Right teaches that in various systems it is expedient to have a plurality of control consoles so that they may control the associated equipment in a predetermined hierarchy. (See the Abstract)

From the teachings of Right, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin,

and Wang to include the foot operated control console comprises one of a plurality of foot operated control consoles as taught by Right to let multiple operators to control the medical equipment, thereby improving efficiency.

The combination of Sakurai, Dustin, Right, and Wang did not specifically disclose each control console includes a unique console identifier to permit the data communication device controller to identify each said control console.

Yaroach teaches an example protocol for an RF transmission signal from a pushbutton RF transmitter. Each transmission from the RF transmitter has a predetermined modulation to digitally encode an identifier portion (47). The identifier portion (47) is used to tell the receiver which RF transmitter transmitted the signal (e.g., a separate identifier code is given for each type or manufacturer of the remote transmitter). (See the Abstract and Col. 3, lines 38-45)

From the teachings of Yaroach, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, Right, and Wang to include each said control console includes a unique console identifier to permit the data communication device controller to identify each said control console as taught by Yaroach to identify the control signals transmitted by the wireless transmitter, thereby restricting the control of medical devices to specified controls signals only.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin, Wang, Stephens, and Snyder et al. as applied to claims 14-18 above, and further in view of Philipsson (US 2001/0007815)

Regarding claim 21, Sakurai discloses the plurality of medical devices comprises a cutting tool (via electric cautery apparatus 3, See paragraph 33). But Sakurai did not specifically disclose the wireless medium comprises a short range radio frequency.

Philipsson teaches a system for establishing a communication link using short range radio frequency communication. (See the Abstract and paragraphs 1-2)

From the teachings of Philipsson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sakurai to include the wireless medium comprises a short range radio frequency as taught by Philipsson to establish a wireless communication link between a mobile communication device with a stationary unit.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claims 14-15 above, and further in view of Yaroach (US 5,790,065).

Regarding claim 25, Sakurai did not specifically disclose the wireless transmitter is configured to transmit an apparatus identifier in association with the selection signal, the apparatus identifier for associating the foot operated control console at the receiver unit.

Yaroach teaches an example protocol for an RF transmission signal from a pushbutton RF transmitter. Each transmission from the RF transmitter has a predetermined modulation to digitally encode an identifier portion (47). The identifier portion (47) is used to tell the receiver which RF transmitter transmitted the signal (e.g.,

a separate identifier code is given for each type or manufacturer of the remote transmitter). (See the Abstract and Col. 3, lines 38-45)

From the teachings of Yaroch, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sakurai to include the wireless transmitter is configured to transmit an apparatus identifier in association with the selection signal, the apparatus identifier for associating the foot operated control console at the receiver unit as taught by Yaroch to identify the signals transmitted by the wireless transmitter, thereby restricting the control of medical devices to specified controls signals only.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claim 14 above, and further in view of Linhares (US 5,336,218).

Regarding claim 26, the combination of Sakurai, Dustin and Wang discloses the structural elements of the claimed invention wherein Sakurai discloses the foot-operated control console further comprises a housing to contain the wireless transmitter, but the combination of Sakurai, Dustin and Wang did not disclose the housing having an attachment to allow a suction hose to be attached to the housing.

Linhares teaches a surgical system with a suction hose attachment (28) to allow the surgical system to be use with different pieces of equipment. (See figure 1 and Col. 3, lines 27-45)

From the teachings of Linhares, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai,



Dustin and Wang to include the housing having an attachment to allow a suction hose to be attached to the housing as taught by Linhares to allow the console to be used with other equipments.

8. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claim 31 above, and further in view of Wang et al. (US 5,524,180).

Regarding claim 36, Sakurai did not specifically disclose said at least one control pedal comprises a variable displacement foot control for controlling intensity settings for one of the medical devices.

Wang teaches a foot operated system with one control pedal comprises a variable displacement foot control for controlling intensity settings for one of the medical devices (via pressure transducer 62 constructed to detect pressure on the foot switches, thereby increasing input voltage, Col. 4, lines 13-31).

From the teachings of Wang, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sakurai to include said at least one control pedal comprises a variable displacement foot control for controlling intensity settings for one of the medical devices as taught by Wang to control the medical devices with more precision by using pressure sensors.

9. Claims 27, 29, 40-42, 44, 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai (US 2002/0156466) in view of Dustin (US 6,853,308), and Wang et al. (US 6,646,541).

Regarding claims 27, 29, and 40-41, Sakurai discloses an apparatus (via surgical system, See the Abstract and Figures 1-4 and 9), the apparatus comprising:

a housing designed to be situated on a floor surface of an area in which the endoscopic medical procedure is performed during the medical procedure (See figure 9);

a plurality of controls within the housing, designed to be operated by a foot of the operator to control the plurality of medical devices, the plurality of controls including a plurality of foot pedals (via Pedals A and B, Figure 1);

But Sakurai did not disclose the plurality of controls include a plurality of foot switches, and the plurality of foot switches including a selection switch for selecting a medical device to be controlled from among the plurality of medical devices.

Dustin teaches a remote control with device selection buttons to allow a particular device to be selected and remotely controlled. As is well known, a device selection button allows some functional buttons such as the volume up or down button to be used on multiple devices. Devices such as the TV and the CD player may be remotely controlled using the same volume up or down button by utilizing the device selection buttons (See Col. 4, lines 16-24 and button group 4 on Figure 2A).

From the teachings of Dustin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Sakurai to include a plurality of foot switches on the housing, and the plurality of foot switches including a selection switch for selecting a medical device to be controlled from among the plurality of medical devices as taught by Dustin to select and control a particular

medical device without adding additional controls for each medical device, thereby reducing costs by using fewer foot pedals if there is a large number of medical devices to be controlled in the system.

The system of Sakurai accepts control inputs directly using wires, and the control signals generated by the plurality of controls are transmitted through the wires. Sakurai did not specifically disclose a wireless transmitter within the housing, to transmit over a wireless medium a device selection signal to cause a remote receiver unit to select the device to be controlled and to transmit control signals to cause the remote receiver unit to control the selected medical device in response to operation of the controls; a wireless receiver to receive the selection signal and the control signals via the wireless medium, the control signals being a first plurality of control signals; a data communication device to transmit a second plurality of control signals, based on the first plurality of control signals, to the selected medical device over a wireless communication medium; and a controller to control the data communication device in response to the first plurality of control signals, including generating the second plurality of control signals based on the first plurality of control signals so that the second plurality of control signals are compatible with the selected medical device; the apparatus further includes a wireless receiver for receiving wireless signals from another device and providing the wireless signals to the apparatus.

Wang teaches a control system (10) for controlling a plurality of medically devices (Abstract). The control system comprising: a master controller (12) and at least one slave controller (14). The master controller may control medical devices connected

to a slave controller (master controller in communication devices via a slave controller, See Col. 2, lines 16-19). The master controller may communicate with the slave controllers using electrical or wireless communication (See Col. 4, lines 23-30). The master controller may include a wireless RF transmitter to transmit over a wireless medium a selection signal to select a medical device to be controlled and a control signal to control the operation of the medical device (See Col. 2, lines 3-13). The slave controller may include a wireless receiver to receive the wireless selection and control signals (via master controller sending signals to medical device connected to the slave controllers, See Col. 3, lines 19-24).

From the teachings of Wang, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sakurai to include a wireless transmitter within the housing, to transmit over a wireless medium a device selection signal to cause a remote receiver unit to select the device to be controlled and to transmit control signals to cause the remote receiver unit to control the selected medical device in response to operation of the controls; a wireless receiver to receive the selection signal and the control signals via the wireless medium, the control signals being a first plurality of control signals; a data communication device to transmit a second plurality of control signals, based on the first plurality of control signals, to the selected medical device over a wireless communication medium; and a controller to control the data communication device in response to the first plurality of control signals, including generating the second plurality of control signals based on the first plurality of control signals so that the second plurality of control signals are compatible with the

selected medical device; and the apparatus further includes a wireless receiver for receiving wireless signals from another device and providing the wireless signals to the apparatus; the apparatus further includes a wireless receiver for receiving wireless signals from another device and providing the wireless signals to the apparatus as taught by Wang to remotely control a plurality of medical devices.

Sakurai did not specifically disclose a battery within the housing for powering the foot-operated control console. However, the examiner takes Official Notice that it is obvious to one of ordinary skill in the art at the time the invention was made to modify the control console to include a battery within a remote control console in order to make the control console free from electrical wires to power the control console, thereby making the control console more portable and convenient to use.

Regarding claim 42, the combination of Sakurai, Dustin, and Wang discloses the receiver unit provides the device control signal as a wireless signal to the selected medical device (via control console modified to be wireless in communication with wireless medical device, See rejection on claim 41 above).

Regarding claim 44, the combination of Sakurai, Dustin, and Wang discloses said receiver unit synchronizes with said foot operated control console (via control console modified to be wireless and in synch with receiver unit in order to communicate wirelessly, See rejection on claim 41 above)

Regarding claim 47, the combination of Sakurai, Dustin, and Wang discloses the wireless transmitter and the wireless receiver of the foot operated control console

comprises a transceiver (via control console modified to include wireless communication circuitry in view of Wang, See rejection on claim 40 above).

Regarding claim 48, Sakurai discloses at least one foot pedal for controlling the selected medical device (via foot pedal A or B, see paragraph 36-37). Dustin teaches a selection control comprising a switch to select devices to be controlled. (See button group 4 on Figure 2A) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sakurai to include at least one control switch for selecting the medical device to be controlled as taught by Dustin to select devices to be controlled.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai in view of Dustin, and Wang as applied to claim 27 above, and further in view of Yaroch (US 5,790,065).

Regarding claim 28, the combination of Sakurai, Dustin, and Wang discloses the structural elements of the claimed invention wherein Sakurai discloses a controller within the housing (via foot switch controller 5, See paragraph 92 and Figure 9) to control device functions in response to operation of the controls.

But Sakurai did not disclose the controller causes the wireless transmitter to transmit an apparatus identifier in association with the control signals, the apparatus identifier for uniquely associating the apparatus with the receiver unit.

Yaroch teaches an example protocol for an RF transmission signal from a pushbutton RF transmitter. Each transmission from the RF transmitter has a predetermined modulation to digitally encode an identifier portion (47). The identifier

portion (47) is used to tell the receiver which RF transmitter transmitted the signal (e.g., a separate identifier code is given for each type or manufacturer of the remote transmitter). (See the Abstract and Col. 3, lines 38-45)

From the teachings of Yaroch, it would have been obvious to modify the combination of Sakurai, Dustin, and Wang to include the controller causes the wireless transmitter to transmit an apparatus identifier in association with the control signals, the apparatus identifier for uniquely associating the apparatus with the receiver unit as taught by Yaroch to identify the control signals transmitted by the wireless transmitter, thereby restricting the control of medical devices to apparatus only.

11. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claim 27 above, and further in view of Linhares (US 5,336,218).

Regarding claim 30, the combination of Sakurai, Dustin and Wang discloses the structural elements of the claimed invention, but did not disclose the housing having an attachment for attaching a suction hose to the housing.

Linhares teaches a surgical system with a suction hose attachment (28) to allow the surgical system to be use with different pieces of equipment. (See figure 1 and Col. 3, lines 27-45)

From the teachings of Linhares, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include the housing having an attachment for attaching a suction

hose to the housing as taught by Linhares to allow the console to be used with other equipments.

12. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claim 31 above, and further in view of Dowling et al. (US 7,228,190).

Regarding claim 37, the combination of Sakurai, Dustin, and Wang did not specifically disclose said selection control switch for selecting a medical device is pressed repeatedly to cycle among the plurality of said medical devices.

Dowling teaches a method to use a single push button or toggle switch to select a next available option. By repeatedly pressing the push button or toggle switch, a user can step through all options available. (See Col. 20, lines 34-41)

From the teachings of Dowling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include said selection control switch for selecting a medical device is pressed repeatedly to cycle among the plurality of said medical devices as taught by Dowling to use a toggle switch to step through all available options, thereby reducing the number of selection control switches required to select all the medical devices.

13. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai in view of Dustin, and Wang as applied to claim 27 above, and further in view of Stephens (US 5,734,254).

Regarding claim 39, the combination of Sakurai, Dustin, and Wang did not specifically disclose the foot-operated control console further includes: an induction coil



within the housing; and a charging circuit within the housing and coupled to the battery and the induction coil, said charging circuit being configured to charge the battery with power induced in the induction coil by a power source outside of the housing.

Stephens teaches a battery charging system for charging batteries from a portable appliance. The system comprises an induction element (transformer winding 32, Figure 1), and a charging circuit (via power converter 30 including voltage and drive level control, and current limiting, See Col. 3, lines 34-41) to control charging of the battery by power electromagnetically induced in the induction element. (See the Abstract)

From the teachings of Stephens, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include an induction coil within the housing; and a charging circuit within the housing and coupled to the battery and the induction coil, said charging circuit being configured to charge the battery with power induced in the induction coil by a power source outside of the housing as taught by Stephens to charge a battery in a portable electronic device.

14. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai in view of Dustin, and Wang as applied to claim 41 above, and further in view of Iwamatsu (US 5,046,107).

Regarding claim 43, the combination of Sakurai, Dustin, and Wang did not specifically disclose the receiver unit further comprising indicators for indicating the selected one of said plurality of medical devices.

Iwamatsu teaches using LEDs as indicators to indicate which input source has been selected by a user. (See Col. 9, lines 26-32)

From the teachings of Iwamatsu, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include the receiver unit further comprising indicators for indicating the selected one of said plurality of medical devices as taught by Iwamatsu to provide indicators for indicating which selection is made, thereby making the system more convenient to use.

15. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. in view of Dustin and Wang as applied to claim 41 above, and further in view of Right (US 4,513,284) and Yaroach (US 5,790,065).

Regarding claim 46, the combination of Sakurai, Dustin, and Wang did not disclose the foot operated control console comprises one of a plurality of foot operated control consoles. Right teaches that in various systems it is expedient to have a plurality of control consoles so that they may control the associated equipment in a predetermined hierarchy. (See the Abstract)

From the teachings of Right, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include the foot operated control console comprises one of a plurality of foot operated control consoles as taught by Right to let multiple operators to control the medical equipment, thereby improving efficiency.

The combination of Sakurai, Dustin, Right, and Wang did not specifically disclose each control console includes a unique console identifier to permit the data communication device controller to identify each said control console.

Yaroach teaches an example protocol for an RF transmission signal from a pushbutton RF transmitter. Each transmission from the RF transmitter has a predetermined modulation to digitally encode an identifier portion (47). The identifier portion (47) is used to tell the receiver which RF transmitter transmitted the signal (e.g., a separate identifier code is given for each type or manufacturer of the remote transmitter). (See the Abstract and Col. 3, lines 38-45)

From the teachings of Yaroach, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, Right, and Wang to include each said control console includes a unique console identifier to permit the data communication device controller to identify each said control console as taught by Yaroach to identify the control signals transmitted by the wireless transmitter, thereby restricting the control of medical devices to specified controls signals only.

16. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai in view of Dustin, and Wang as applied to claims 40-41 above, and further in view of Amou et al. (US 5,223,826).

Regarding claim 49, the combination of Sakurai, Dustin, and Wang did not specifically disclose the receiver receives information for modifying settings of the foot operated control console from the receiver unit. Amou teaches that in a

control/supervisory system, it is possible to modify the components of the system by modifying the associated setting circuits (See the Abstract and Col. 14, lines 62-68). From the teachings of Amou, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sakurai, Dustin, and Wang to include the receiver receives information for modifying settings of the foot operated control console from the receiver unit as taught by Amou to allow modification of components in a system, thereby making the system more versatile to operate.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YONG HANG JIANG whose telephone number is (571)270-3024. The examiner can normally be reached on M-F 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian A. Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. J./  
Examiner, Art Unit 2612

/Brian A Zimmerman/  
Supervisory Patent Examiner, Art Unit 2612